REVENUE DEPARTMENT INTEROFFICE MEMORANDUM

TO: County Licensing Officials
County System Vendors

FROM: J. Starling, Registration Manager
Motor Vehicle Division

SUBJECT: Daily Update of Motor Vehicle Registration Data

DATE: January 20, 2009

Some time ago, the Department of Revenue, Motor Vehicle Division, began discussions regarding the need for law enforcement to have motor vehicle registration data available to them in a timely manner. Motor vehicle registration data is currently transmitted each month to the Department and maintained on the Alabama Vehicle Information System (ALVIS); however, the current process is labor intensive. In order to address this important issue, the Department has partnered with the University of Alabama CARE Research and Development Laboratory (CRDL), who is well-respected within the law enforcement community and is responsible for the development of the Law Enforcement Tactical System (LETS) that is currently being used by many Alabama law enforcement officers.

The Motor Vehicle Registration update issue was submitted as a project in a Federal Motor Carrier Safety Administration (FMCSA) grant application. The grant was approved, and after much discussion and research, we are ready to proceed with the next phase of the project. The attached document provides an overview and technical specifications for the proposed daily registration update process. The proposed process allows county licensing offices to provide motor vehicle registration data to the Motor Vehicle Division via a secure file transfer protocol (FTP) process. An edit will be performed on the motor vehicle registration data and the data will be uploaded to the ALVIS database. The entire process will be done programmatically each night and the data will be available to law enforcement the next day.

We request that you distribute the attached document to your administrative and technical staff and/or system vendor for review, and provide any comments to me by **February 20, 2009**. Some of the issues for consideration may include the following:

- Will you be able to work with the process as defined?
- What is your anticipated cost?
- Are there adaptations that will make the process easier?
- Are there other factors to consider that have not been addressed?

We will address any issues, make necessary corrections and redistribute the approved daily registration update process document to you. The CRDL will then contact your technical staff and system vendor to discuss the terms of the agreement and assist with any programming changes.

Your input is needed to guarantee the success of this project. Please contact me if you have any questions regarding the proposed daily registration update process before the deadline (February 20th). Thank you in advance for making this important project a reality.

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Executive Summary

This project is one of three 2008 CVISN projects sponsored by the Federal Motor Carrier Safety Administrator (FMSCA). In the 2008 CVISN grant, a weakness was identified with data timeliness for the vehicle registration data obtained from the county licensing officials. This data is generally only obtained every month and is not sufficiently up-to-date to ensure accuracy in regard to the enforcement of motor vehicle regulations.

This sub-project, when fully implemented, will effectively make the registration information "day current." This project is intended to improve the quality and timeliness of motor vehicle registration data that originates at the county level but is aggregated at the state level. The motor vehicle registration data would be available to enforcement officers in a matter of days instead of months.

Specifically, this project involves the development of:

- A secure FTP site for the transfer of motor vehicle registration data from the county to ADOR over an internet connection;
- An upload process to allow motor vehicle registration data provided by county licensing officials to be uploaded to the Alabama Vehicle Information System (ALVIS) on a daily basis;
- A new process to receive the data, edit for quality and completeness and upload to ALVIS, the state's repository;
- A windows client for use in optional automation of the upload process as well as the process for receiving the data.
- Procedures, training and support to assist the counties in adopting and deploying this new approach to data collection.

This new process will also improve the accuracy of the current Alabama vehicle registration process. It will also create a repository for in-depth analysis and queries for the law enforcement and commercial vehicle enforcement communities.

An additional benefit of this data improvement project would be the impact it has on the IRP *ad valorem* validation process. Currently, the validation process involves a great deal of "hands-on" processing that could be streamlined with technology. The project would also allow IRP vehicle *ad valorem* tax records included in the data provided by the counties to be stripped and loaded to a table to be used to automatically verify *ad valorem* tax payments prior to IRP registration, as required by law. The electronic verification of the *ad valorem* tax receipt would reduce or eliminate the need for MCS employees to examine and image the receipts.

The project will be prototyped in partnership with one of the county registration vendors. The basic process will establish a successful upload process first with a single county, and then with the remaining counties who are pilot vendor customers. The county vendors will participate in the design

of the upload process, and will begin to incorporate their counties after pilot vendor has completed a substantial percentage of its counties. A basic timetable for the project is as follows:

- Design of ftp process approved by county and vendor stakeholders – February 15, 2009
- Implementation of windows client for aide in ftp process – March 1, 2009
- Implement ftp site with pilot county – April 1, 2009
- Integrate ftp site with ALVIS – June 1, 2009
- Implement ftp site with all counties supported by pilot vendor – August 1, 2009
- Add selected counties from other vendors – October 1, 2009
- Go live with all counties – January 1, 2010

System Design

As noted above this project involves the development of new procedures, data submission timelines and a central repository to hold vehicle registration information that is captured from all over Alabama. Data will be provided to this repository via secure FTP alone, or with the use of a windows client that automates the secure FTP process. The following steps are needed in designing this system:

1. Establish the front-end transfer process:
   a. Work with county officials and local vendors to define and obtain support for the new process.
   b. Build the ftp transfer file process
   c. Build windows client for ftp transfer file process automation
2. Establish the back-end:
   a. Establish secure ftp server:
      i. Deliver server to RSA (done)
      ii. Establish ftp site (done)
   b. Establish transfer process:
      i. Define the process for client-side use of secure ftp (this should be done under "Secure FTP" as part of the "Technical Specifications" portion of this document)
      ii. Backend dashboard to monitor update status from each county
   c. Establish file update process:
      i. Implement edits
      ii. Implement merge program
      iii. Implement confirmation/error file generation (files to be returned to submitting county)
      iv. Provide support/training for county officials and vendors on edits and resubmission process
3. DRIVE portal (Department of Revenue Information on VEhicles):
   a. Integrate DRIVE to backend repository (thus establishing a real-time view of the uploaded data)

b. Enhance DRIVE with additional functionality:
    i. User-produced dashboard widgets
    ii. User authentication
    iii. Additional security
    iv. Links to MLI and other systems
    v. Additional title functionality TBD
4. Replicate repository to a new version of ALVIS
    a. Separate copy of ALVIS to be maintained in parallel with the current production ALVIS until full cut-over
5. Determine what additional services, if any, would be beneficial to contributors:
    a. Validation of Alabama driver's license at point of registration
    b. Additional reports and services shared through the DRIVE portal
    c. Other services
6. Develop controlled access for Alabama's law Enforcement community.
    a. Data replication to LETS
    b. Current data for NLETS inquiries

Phase-In Process and Milestones

The overall phase-in process is proposed as follows:

1. Establish the above process for pilot county (Lauderdale)
    a. Debug end-to-end system
    b. Resolve contractual business issues with pilot vendor
2. Replicate same process for all remaining pilot vendor counties
3. Promulgate system to other vendors:
    a. Establish MOUs, contracts, rules of engagement for other vendors/counties:
        i. Delta
        ii. S & W
        iii. Gemini
        iv. Ingenuity
        v. County IT shops
    b. Implement system in one county for remaining vendors/counties:
        i. Delta = Lauderdale
        ii. S & W =
        iii. Gemini =
        iv. Ingenuity = (Elmore, Montgomery or Bibb)
        v. County IT shops (Jefferson, Mobile, Shelby, Tuscaloosa, etc.)
    c. When operational, replicate to remaining counties for each vendor

A table of expected milestones is as follows:

Schedule of Milestones

Milestone	Expected Completion Date
Secure FTP Site	December 1, 2008
Complete draft of design document	January 15, 2009
Design document approved by all stakeholders	February 15, 2009
Implement file update process on backend	March 1, 2009
Complete contractual arrangement with pilot vendor for file collection process	March 1, 2009
Begin live beta tests with one pilot county	April 1, 2009
Implement DRIVE on the "one pilot county" data	April 15, 2009
Begin negotiation with other county vendors	May 1, 2009
Implement replication of ftp repository to ALVIS	June 1, 2009
Implement dashboard to monitor transfer process	June 1, 2009
Add 3-5 additional pilot vendor counties	June 1, 2009
Add all pilot vendor counties	August 1, 2009
Add one county with each remaining county vendor	October 1, 2009
All counties operational	January 1, 2010

Technical Specifications

Overview

County will prepare a file and FTP the file to the State FTP server on a daily basis. County will retrieve a file reflecting results of State processing (errors).

Timing

Records created on County system will be sent at the end of the day, or in the evening. The windows client will be available for automating the process. If County prefers to use manual FTP process, a scheduled or automated task would be recommended so that a file is sent every day including weekends, even if it contains no "detail" records (see File Format). This will allow the State to verify receipt of a file for every day.

Secure FTP

Secure FTP (FTP over SSL) will be used to transfer the file from the County to the State. State will assign a User-Id and Password to each County to be used during the FTP connection. The home folder

(directory) will be determined by the County's User-Id, so once connected the County need only PUT or SEND the file. Once connected, the County will **not** be able to change folders (directories) to access other counties data. State will **not** originate any connection from State FTP server to the County system. The windows client will adhere to all of the aforementioned criteria in the "SecureFTP" process, automating the PUT or SEND of the file and receipt reflecting the results of State processing (errors).

File Name

The name of the file delivered to the State will be in form ZZCCYYMMDDHHMM.dat, where:

ZZ	2-character file identifier "MV"
CC	2-digit county number
YY	2-digit year
MM	2-digit month
DD	2-digit day
HH	2-digit hour
MM	2-digit minute

The filename should be limited to these 14 characters.

File Format

In order to verify delivery of a complete file, the first record in the file will be a special "header" record, followed by "detail" record(s), followed by a special "footer" record. For example:

Record Type	Data Field 2	Data Field 3	Data Field 4	Data Field ...
H				
A				
A				
D				
C				
…				
F				

Record Types: H – Header, A – Detail Add, C – Detail Change, D – Detail Delete, F – Footer
Header Record Format – complete field list not yet defined
Detail Record Format – similar content to current record but complete field list not yet defined
Footer Record Format – complete field list not yet defined

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Additions, Changes and Deletions

Allowances will be made in detail record(s) for these activities. This may require some modifications to County database in order to report changes and deletions.

Confirmation and Errors

Once the County file is delivered to State FTP server, State will move the file to a processing folder (directory) so it will no longer be visible to the County. Once State validation and processing is complete, State will insert a confirmation/error text file in the County's FTP folder. This file will be written to the "ValidationErrors" folder with the name in the form ZZCCYYMMDD.dat, where:

ZZ	2-character file identifier "ER"
CC	2-digit county number
YY	2-digit year
MM	2-digit month
DD	2-digit day
HH	2-digit hour
MM	2-digit minute

The exact format and content of the confirmation/error file is not yet defined. The windows client will automatically get this file if it is in use. The County will need to open this file and inspect for errors, if any. If the County is not using the provided windows client, County will GET this file using FTP and inspect for errors, if any.

Data Edits

The data edits below are required for all data being entered into the repository:

1	**VIN**
	• The VIN will be validated using standard VIN validation logic.
2	**Tag Type**
	• The tag type will be validated against the state list of tag types.
3	**Tag Number**
	• The tag number is required and will be validated against the plate pattern that corresponds to the tag type.
4	**Vehicle Year**
	• The vehicle year cannot be more than two years greater than the current year.
	• The vehicle year should also correspond to the decoded VIN information.
5	**Vehicle Make**
	• The vehicle make will be validated against the VIN decoded vehicle make.
6	**Vehicle Model**
	• The vehicle model will be validated against the VIN decoded vehicle model.

7	**Color**
	• The vehicle color will be validated against a list of approved colors that is held by state.
8	**Body Style**
	• The vehicle body style will be validated against a list of approved body styles that is held by the state.
9	**Name**
	• The registrant name is required.
10	**Physical Address**
	• The following address information will be required:
	o Address Line 1
	o City
	o State
	o Zip
11	**Issue Date**
	• The issue date is required and should not be greater than the current date.
12	**Expiration Date**
	• The expiration date is required and must be greater than the issue date.